AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for authenticating a mobile to a Serving Network, the method comprising the steps of:

receiving a first key at the Serving Network;

establishing a security association between the mobile and the Serving Network thus authenticating the mobile to the Serving Network based upon the first key;

challenging the authenticity of the mobile using the first key; and

preventing the mobile from having access to the Serving Network when the mobile cannot authenticate itself to the Serving Network SN.

2. (New) The method of claim 1, wherein challenging the authenticity of the mobile is performed periodically, a periodically, continually, or continuously during the communication session.

3. (New) The method of claim 1, where in challenging the authenticity of the mobile comprises:

generating a local authentication message;

transmitting the local authentication message to the mobile;

receiving a first local authentication reply from the mobile, wherein the local authentication reply is formed using a second key;

generating a second local authentication reply using the first key;

comparing the first and second local authentication replies; and

authenticating the mobile when the first and second local authentication replies coincide.

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4.   (New) The method of claim 1, wherein the first key is known only by the Serving

Network and the second key is known only by the mobile.

5.   (New) The method of claim 1, wherein the first and the second key have substantially the

same value.

6.   (New) The method of claim 1, wherein receiving the first key comprises receiving a clear

or unciphered anonymity key.